STAFF REPORT

LOCALIZED HEALTH IMPACTS REPORT

For Selected Projects Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-11-604, Advanced Vehicle Technology Manufacturing

CALIFORNIA
ENERGY COMMISSION
Edmund G. Brown Jr., Governor

JULY 2012
CEC-600-2012-005

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PREFACE

The increased use of alternative and renewable fuels supports California's commitment to curb greenhouse gas emissions, reduce petroleum use, improve air quality, and provide for the sustainable production and use of biofuels in California. This *Localized Health Impacts (LHI) Report* addresses some of the advanced vehicle technology manufacturing facilities in California that will contribute to the state's climate change goals.

Assembly Bill 118 (Núñez, Chapter 750, Statutes of 2007) created the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). This statute, amended by Assembly Bill 109 (Núñez, Chapter 313, Statutes of 2008), authorizes the California Energy Commission to "develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change policies."

The statute also directs the California Air Resources Board (ARB) to develop guidelines to ensure air quality improvements. The ARB *Air Quality Improvement Program (AQIP) Guidelines*, approved in 2008, are published in the *California Code of Regulations (CRR), Title 13, Motor Vehicles, Chapter 8.1, AB 118 Air Quality Guidelines for the Alternative and Renewable Fuel and Vehicle Technology Program and the AQIP*. The *AQIP Guidelines* require the Energy Commission, as the funding agency, to analyze the localized health impacts of ARFVTP-funded projects that require a permit (13 CCR § 2343).

AB 118 Air Quality Guidelines (California Code of Regulations [CCR], Title 13, Chapter 8.1, Section 2343[c][6] [A]) require the Energy Commission to analyze the collective locations of the funded projects, analyze the impacts in communities with the most significant exposure to air contaminants, or both, including, but not limited to, communities of minority populations or low-income populations, and identify agency outreach to community groups and other affected stakeholders.

The Energy Commission received proposals in response to Solicitation PON-11-604 for Advanced Vehicle Technology Manufacturing and is considering approving and funding the projects described in this report. This report contains the site descriptions for the proposed projects, including geographic locations, potential benefits, and outreach efforts as the project applicants declared in their applications. The projects potentially require building permits, mechanical/electrical permits, or fire/workplace safety permits for activities determined to have no likely impacts on the environment.

ABSTRACT

California Code of Regulations (CCR), Title 13, Motor Vehicles, Chapter 8.1, § 2343(c)(6), requires the California Energy Commission to consider the localized health impacts when selecting projects for funding. For each funding cycle, the Energy Commission is required to analyze localized health impacts for projects proposed for program funding that require a permit.

This report reviews the project proposals under consideration for funding that were submitted in response to the Advanced Vehicle Technology Manufacturing Grant Solicitation (PON-11-604) under the Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP). This report contains project descriptions of the proposed facilities and sites including locations and potential impacts contained in the applicants' proposals.

This report analyzes all the locations of the proposed projects, the impacts in communities with the most significant exposure to air contaminants or localized air contaminants, or both, including but not limited to, communities of minority populations or low-income populations, as declared by the project proposers in their applications or as determined by Energy Commission staff. This report identifies outreach to community groups and other affected stakeholders as declared by the project proposers.

The projects analyzed in this report are:

- Wrightspeed, Inc., "Manufacturing the Wrightspeed Digital DriveSystem (DDS) Retrofit Kit."
- Zero Motorcycles, Inc., "Strategic Expansion of Volume Manufacturing Capacity for Electric Motorcycle Production in California."
- Tesla Motors, Inc., "Model X Manufacturing Line."
- Quallion, LLC, "Expansion of Battery Management System Integration Facilities for Lithium Ion Batteries."

Keywords: Air quality, demographics, environmental justice, greenhouse gas emissions, localized health impact, manufacturing

Please use the following citation for this report:

Baronas, Jean. 2012. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2012-005.

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EXECUTIVE SUMMARY

Under the *California Code of Regulations (CCR) Title 13, (CCR § 2343),* this report describes the manufacturing projects proposed for Alternative and Renewable Fuel and Vehicle Program (ARFVTP) funding that may or may not require a conditioned or discretionary permit or environmental review, such as conditional use permits, air quality permits, wastewater permits, hazardous waste disposal permits, and other land-use entitlements. The projects require building permits, mechanical/electrical permits, or fire/workplace safety permits for activities determined to have no likely impact on the environment.

The California Energy Commission is required to assess the localized health impacts of the projects proposed for ARVTP funding under Solicitation PON-11-604, Advanced Vehicle Technology Manufacturing. This report focuses on the potential impacts the projects may or may not have on a particular community, particularly those considered vulnerable to emissions increases. For projects located in high-risk communities, this report assesses the impacts from criteria emissions/air toxics, the air quality attainment status, and mitigation plans, if available. This report includes information about the applicants' community outreach efforts.

Environmental justice (EJ) communities which are, low-income communities, and minority communities which are considered to be the most impacted by an activity that could result in increased criteria and toxic air pollutants[1] within an area because these communities typically have the most significant exposure to the emissions. Assessing these projects and the communities surrounding them is important because of the associated health risks. Preventing health issues from contributions to air pollution in any community is important, but it is especially important to minimize any negative impacts in communities that are already considered to be at risk due to their continued exposure to these pollutants.

The proposed projects include four advanced vehicle manufacturing and component assembly facility modifications, none of which, in the course of normal operations, generate criteria emissions, particulate matter (PM^2), or air toxics at any appreciable level. The proposed projects are assessed for potential health impacts for the communities in which they could be located. Based on this assessment, it is not anticipated that implementing the proposed projects will have negative impacts on surrounding communities (including those communities considered most vulnerable) because there will not be a net increase in criteria and toxic emissions. Potentially, the projects stand to provide solutions and alternatives that could provide cleaner air.

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1 "Criteria pollutants" are Carbon Monoxide, Sulfur Oxide, Nitrogen Oxide, Ozone, and Lead. They are common and found all over the United States.

2 "Particulate matter," is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled, and a chief component of exhaust emissions from heavy-duty diesel engines.

CHAPTER 1:
Projects Proposed for Funding

The projects proposed for California Energy Commission funding are:

- Wrightspeed, Inc., of San Jose proposes "Manufacturing the Wrightspeed Digital DriveSystem (DDS) Retrofit Kit" to:
    - Expand an existing manufacturing facility to accommodate a manufacturing line for range-extended DDS retrofit kit designed to work with medium-duty trucks.
    - Establish manufacturing equipment and processes to assemble and integrate components.
    - Set up and validate manufacturing test procedures and process flow.
- Zero Motorcycles, Inc., of Scotts Valley proposes "Strategic Expansion of Volume Manufacturing Capacity for Electric Motorcycle Production in California" to:
    - Implement manufacturing and engineering process improvements.
    - Place new primary manufacturing lines and subassembly lines into production.
- Tesla Motors, Inc., of Fremont proposes a "Model X Manufacturing Line" to:
    - Modify an existing manufacturing line currently used for an all electric sedan (Model S) to accommodate an electric, all-wheel-drive, crossover utility vehicle (Model X).
    - Specify, purchase, and integrate new equipment specifically designed for component manufacture for the Model X.
- Quallion LLC of Sylmar proposes an "Expansion of Battery Management System Integration Facilities for Lithium Ion Battery Modules" to:
    - Acquire new electronics assembly and test equipment, modify and expand existing facilities, and enhance the process of battery electronics integration.
    - Expand existing electronics manufacturing for high-volume integration of battery management system[3] (BMS) electronics for batteries used in electric vehicles.

3 A battery management system protects and extends the life of a battery.

CHAPTER 2:
Community Status of the Proposed Projects

On February 6, 2012, the California Energy Commission, through the ARFVTP, released a competitive Grant Solicitation PON-11-604. Under this solicitation, applications were due March 20, 2012. The solicitation was issued to share costs of the development of manufacturing and assembly facilities that produce alternative fuel vehicles, advanced technology vehicles, or vehicle components to help the State meet greenhouse gas emissions and petroleum fuel demand reduction goals.

The Energy Commission is required to analyze and publish this report for public review and comment for 30 days. This report collects available information about the potential air quality impacts of proposed manufacturing projects and provides a collective, narrative analysis of the potential for localized health effects from the projects. The projects propose to establish manufacturing facilities for an electric vehicle retrofit kit, electric motorcycles, electric cross-over utility vehicles, and facilities for the integration of battery management systems with lithium ion battery modules. In normal operations, these facilities and projects do not generate criteria emissions, particulate matter (PM), or air toxics at a significant level.

Based on the Energy Commission's interpretation of the AQIP Guidelines, this report provides information about the communities surrounding the potential project sites and assesses the potential impacts to public health in those communities as a result of the project. This report is prepared under the *California ARB AQIP Guidelines, California Code of Regulations (CCR), Title 13, Motor Vehicles, Chapter 8.1 (CCR § 2343)*:

> "(6) Localized health impacts must be considered when selecting projects for funding. The funding agency must consider environmental justice consistent with state law and complete the following:
>
> (A) For each fiscal year, the funding agency must publish a staff report for review and comment by the public at least 30 calendar days prior to approval of projects. The report must analyze the aggregate locations of the funded projects, analyze the impacts in communities with the most significant exposure to air contaminants or localized air contaminants, or both, including, but not limited to, communities of minority populations or low-income populations, and identify agency outreach to community groups and other affected stakeholders.
>
> (B) Projects must be selected and approved for funding in a publicly noticed meeting."

This report is not intended to be a detailed environmental health impact analysis nor is it intended to substitute for the comprehensive environmental review conducted according to California Environmental Quality Act (CEQA) which would provide detailed analyses of the projects' potential for adverse environmental effects. The *AQIP Guidelines,* however, mandate that the Energy Commission tracks projects' progress through the CEQA process and ensures a

commitment exists from the project proposers to complete all mitigation measures required by the permitting agency before they receive the first funding allocation.

The Environmental Justice Screening Method (EJSM)

Staff reviewed results from the Environmental Justice Screening Method (EJSM) to identify projects located in areas with social vulnerability indicators and the greatest exposure to air pollution and associated health risks.[4] The EJSM was developed to identify low-income communities (cities) highly affected by air pollution for assessing the impacts of climate change regulations, specifically Assembly Bill 32 (Núñez/Pavley, Chapter 488, Statutes of 2006), the California Global Warming Solutions Act of 2006.

The EJSM identifies the various risk levels in regions throughout California, and high-risk communities are considered especially vulnerable to even the smallest impacts. The EJSM integrates data on exposure to air pollution, cancer risk, ozone concentration and frequency of high ozone days, race/ethnicity, poverty level, home ownership, median household value, educational attainment, and sensitive populations (populations under 5 years of age, or over 65 years of age).

The ARB applied the EJSM to the San Francisco Bay Area, San Joaquin Valley, and California's desert regions. However, the analyses consider only income among the list of social vulnerability indicators. For communities (cities) not yet assessed in the EJSM, the Energy Commission identifies high-risk areas as those in nonattainment basins for ozone, particle pollution, or PM 2.5 and PM 10[5], along with high poverty and minority rates. Staff collected information about predicted emissions from the proposed project sites.

This report contains assessments of projects proposed to be located in cities impacted by air pollution. The populations are presumed to be most susceptible to health risks because of their exposure to criteria and toxic air pollutants on a more continual basis as compared with other geographic regions.

For this assessment, the Energy Commission interprets "permits" to connote discretionary and conditional use permits because they require a review of potential impacts to a community and the environment before issuance. For air permits, local air districts conduct a New Source Review (NSR) to determine the emission impacts. The proposed projects may or may not require ministerial permits for building modifications.

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4 California Air Resources Board (ARB), *Air Pollution and Environmental Justice, Integrating Indicators of Cumulative Impact and Socio-Economic Vulnerability Into Regulatory Decision-Making, 2010.* (Sacramento, California) Contract authors: Manuel Pastor Jr., Ph.D., Rachel Morello-Frosch, Ph.D., and James Sadd, Ph.D.

5 PM 2.5 is fine particles less than 2.5 micrometers which are hard to detect and come from motor vehicles, power plants and fires. PM 10 is coarse particles 2.5-10 micrometers which come from crushing or grinding things, and dust stirred up on the roads.

Staff collected information on ethnicity, age, and other demographics for the city where the potential project, if funded, would be located to identify those cities with higher minority populations, lower incomes, and more highly sensitive groups based on age. For this assessment, staff identifies sensitive populations as individuals younger than 5 years of age and older than 65 years of age.

Community Status

The following community status for the proposed projects is based on the ARB *Proposed Screening Method,* which integrates data to identify low-income communities that are highly impacted by air pollution.[6] The California State Implementation Plans (http://www.arb.ca.gov/planning/sip/sip.htm) are used as a source for public notices for attainment plans. The *Green Book Nonattainment Areas for Criteria Pollutants* (http://www.epa.gov/oaqps001/greenbk) is also an information source for this assessment.

Table 1 summarizes the findings for all of the projects assessed in this report. For high-risk communities, more detail is provided in subsequent chapters of this report. Staff identifies high-risk communities using the following factors: (1) those located in nonattainment air basins for ozone, PM 2.5, and/or PM 10; (2) those located in communities with high poverty, minority, and/or unemployment rates; and (3) those located in communities with a high percentage of sensitive populations (under 5 years of age or over 65 years of age). All of the proposed projects would be located in nonattainment zones for ozone, PM 2.5, and PM 10, and two projects would also be located in high-risk communities.

2California Air Resources Board (ARB), *Proposed Screening Method for Low-Income Communities Highly Impacted by Air Pollution, 2010* (Sacramento, California).

Table 1: Community Status for Proposed Projects

Company /Project	High-Risk Community	CEQA Complet-ed	Air District Permit Status	Attainment Status for Ozone, PM 2.5, PM 10
Wrightspeed, Inc. - Manufacturing the Wrightspeed Digital DriveSystem Retrofit Kit, 2540 Junction Ave., San Jose, CA 95134	YES	In process	In process	Non-attainment (ALL)
Zero Motorcycles, Inc. – Strategic Expansion of Volume Manufacturing Capacity for Electric Motorcycle Production in California, 170 Technology Circle, Scotts Valley, CA 95066	NO	In process	In process	Non-attainment (ALL)
Tesla Motors, Inc. - Model X Line Manufacturing Line 45500 Fremont Blvd., Fremont, CA 94538	NO	In process	In process	Non-attainment (ALL)
Quallion, LLC. - Expansion of Battery Management System Integration Facilities for Lithium Ion Battery Modules 12744 San Fernando Road, Sylmar, CA 91342	YES	In process	In process	Non-attainment (ALL)

Source: Energy Commission staff analysis

Wrightspeed, Inc.

Project Name

Wrightspeed, Inc., "Manufacturing the Wrightspeed Digital DriveSystem Retrofit Kit"

Project Description

Wrightspeed proposes to produce a range-extended Digital DriveSystem (DDS) electric drive retrofit kit, which would require expansion of manufacturing capacity. The DDS will be used in high-fuel consumption vehicles, for example, Classes 3 – 6, medium duty (MD) trucks. The project, will include testing and validation of the DDS which will include assembling and testing battery packs; drive trains (motor and gearbox); and electronic subsystems such as controllers and inverters; and DDS integration, packing, and shipping. Testing on a converted truck has shown that the fuel consumption improved from 12 MPG with the original diesel engine, to 44 MPG (diesel and electricity, on a cost-equivalent basis) with the new Wrightspeed powertrain.

Project Site

The proposed project site is located at 2540 Junction Avenue, San Jose, California, 95134. The building is the Wrightspeed headquarters. It is a 31,000-square–foot, two-story structure. About 25 percent of the first floor is manufacturing space, and 50 percent more will be modified to accommodate the new manufacturing line. The same area will be used for testing, integrating, and shipping. The proposer also plans to convert office space as well as move and enlarge a stockroom. Manufacturing is already permitted.

The facility is located in the Bay Area Air Quality Management District (BAAQMD), a nonattainment area for ozone and PM 2.5 and PM 10. All commercial buildings surround the site, and the nearest residential area is roughly one-half mile north of the project site.

Project Impacts

The project site is planned for an EJ community with social vulnerability indicators. Combined with the community's high exposure to air pollutants and related health risks, the area could be disproportionately affected if the project were to result in an emissions increase. There are currently no major negative health impacts identified from the proposed project, and the Energy Commission anticipates no net adverse impact in air pollutants or health conditions related to the activities in this project. According to the applicant, the project's activities will not produce emissions beyond those from testing engines for retrofitting existing fleet trucks. All engines will be ARB 2010 Heavy-Duty Diesel (HDD) -compliant.

Outreach Efforts

Wrightspeed notes it plans to communicate the benefits of this proposed project through press releases and articles. The BAAQMD's experience issuing permits will ensure that Wrightspeed complies with all federal, state, and air district standards to guarantee the safety and health of surrounding communities.

Zero Motorcycles, Inc.

Project Name

Zero Motorcycles, Inc., "Strategic Expansion of Volume Manufacturing Capacity for Electric Motorcycle Production in California"

Project Description

Zero Motorcycles, Inc., proposes to expand and scale-up its existing factory and place new manufacturing and assembly lines for electric drive motorcycles into production. The assembly lines will include design updates, manufacturing, and engineering process improvements. Zero Motorcycles plans a 50 percent production workflow increase in terms of motorcycles produced per labor hour and they plan to purchase new equipment for improved manufacturing throughput. Zero Motorcycles notes in their application that the electric motorcycles will be efficient, lightweight, and practical and will operate without the noise, fumes, spills or maintenance associated with traditional internal combustion engines.

Project Site

Zero Motorcycles plans to use a multiuse site consisting of a warehouse, fabrication plant, laboratory, and office located at 170 Technology Circle, Scotts Valley, California, 95066. The site is permitted for manufacturing and is located in the Monterey Bay Unified Air Pollution Control District, which is a nonattainment area for ozone, PM 2.5, and PM 10. The site is within 500 yards of a state highway and is not located within any residential area.

Project Impacts

No EJ communities with social vulnerability indicators exist in the Scotts Valley area. Given the community's high exposure to air pollutants and related health risks, however, this area could be disproportionately affected if the project were to result in an emissions increase. There are currently no identified major negative health impacts from the proposed project, and the Energy Commission anticipates no net adverse impact in air pollutants or health conditions related to this project.

The manufacturing of the electric motorcycles in this project will be done to the strictest environmental health and safety standards and is not expected to trigger any air quality hazards. Furthermore, this facility will meet or exceed existing air quality standards for the State of California as well as those from the Monterey Bay Unified Air Pollution Control District.

Outreach Efforts

Zero Motorcycles notes that the project has been publicized in local and national media as part of Scotts Valley's ongoing efforts to increase green employment in the local community. Zero Motorcycles plans to update stakeholders periodically. The Monterey Bay Unified Air Pollution Control District has experience issuing permits and will ensure that Zero Motorcycles complies with all federal, state, and air district standards to guarantee the safety and health of all surrounding communities.

Tesla Motors, Inc.

Project Name

Tesla Motors, Inc., "Model X Line Manufacturing Line"

Project Description

Tesla Motors, Inc., proposes to modify and expand manufacturing lines currently used to produce the Model S sedan to assemble the Model X, which is an electric, all-wheel-drive crossover zero emissions vehicle (ZEV). About 10,000 vehicles (Model X) are proposed to be produced annually. The goal is to accelerate the adoption of electric vehicles (EVs) through the introduction of a new model that meets the needs of consumers considering a vehicle purchase in two of the largest segments in the industry, the SUV and minivan segments.

Project Site

The Tesla Motors manufacturing site is located at 45500 Fremont Blvd., Fremont, CA, 94538. The site is zoned industrial and bordered on the west by Fremont Boulevard and Interstate 880. There are no homes, schools, day care facilities, and elder care facilities within the immediate vicinity of the project site.

This site is in the BAAQMD, which is a non-attainment area for ozone, PM 2.5 and PM 10.

Project Impact

No EJ communities with social vulnerability indicators exist in this area. Given the community's high exposure to air pollutants and related health risks, however, this area could be disproportionately affected if the project were to result in an emissions increase. There are currently no identified major negative health impacts from the proposed project, and the Energy Commission anticipates no net adverse impact on air pollutants or health conditions related to electric vehicle manufacturing. The BAAQMD administered a Title V[7] air permit for the facility. The emissions associated with the proposed Model X production are significantly lower than the Title V operational limits. According to the applicant, the Model X production is not expected to emit any criteria air pollutant or toxic air emissions. Tesla Motors' targeted future production of more than 400,000 vehicles (including the 10,000 Model X) annually will have total emissions significantly lower than current Title V permit operational limits. Tesla Motors expects that there will be no potential localized health impacts from the project.

Outreach Efforts

Tesla Motors has engaged in regular outreach meetings and reporting to the Fremont City Council and the surrounding community, including local trade schools. The BAAQMD's experience in issuing permits will ensure that Tesla Motors complies with all federal, state, and air district standards to guarantee the safety and health of all surrounding communities.

[7] Title V permits ensure that facilities are in compliance with the United States Clean Air Act

Quallion, LLC

Project Name

Quallion LLC, "Expansion of Battery Management System Integration Facilities for Lithium Ion Battery Modules"

Project Description

Quallion, LLC, proposes to relocate, within its existing facility, and expand its current electronics workshop (The applicant has identified an underused space within its building.) and implement new equipment to advance high volume testing and integration of high-voltage advanced BMS. The applicant notes that the new equipment would include a high-voltage battery tester, humidity-controlled thermal chambers, data acquisition recorders, and a vibration table. Potentially, any indirect emissions from the use of the new equipment will be offset by the benefits of using batteries in vehicles.

Project Site

The proposed site is located at 12744 San Fernando Road in Sylmar, California, 91342, an industrial-zoned area. The proposed site is operated by the project applicant. No expansion of the building is proposed; the plan is to modify the existing building's interior.

The facility is located in the South Coast Air Quality Management District (SCAQMD), which is a nonattainment area for ozone, PM 2.5 and PM 10. The proposed site is located adjacent to a residential neighborhood on the southeast property line.

Project Impacts

The proposed site is planned for an EJ community with social vulnerability indicators. Combined with the community's high exposure to air pollutants and related health risks, the area could be disproportionately affected if the project were to result in an emissions increase. There are currently no identified major negative health impacts from the proposed project, and the Energy Commission anticipates no net adverse impacts in air pollutants or health conditions related to the battery assembly facility and integration processes.

According to the applicant, the project will not produce any emissions and, as such, will not produce any health impacts. The applicant reports that no air emissions would be directly associated with the operations. Further, the applicant notes that the proposed project would not increase traffic at the site, generate additional noise or odors, and generate hazardous waste.

Outreach Efforts

The proposer plans to invite local community members to tour its facility. Quallion, LLC, states that it enjoys a good relationship within the local community.

CHAPTER 3:
Location Analysis and Community Impacts

For this report, the locations for the proposed project and the related community impacts are evaluated through environmental justice (EJ) indicators as follows:

- A ***minority EJ*** is indicated if a minority subset represents more than 30 percent of a given city's population.
- A ***poverty level EJ*** is indicated if a city's poverty level exceeds California's poverty level (for the entire state – 13.7 percent).
- An ***unemployment EJ*** is indicated if a given city's unemployment rate exceeds California's unemployment rate (for the entire state – 10.9 percent as of January 2012).
- An EJ indicator is also noted for cities where the ***percentage of persons younger than 5 years of age or older than 65 years of age*** is 20 percent higher than the average of the percentage of persons under 5 years of age or over 65 years of age for the entire state. (For the entire state, the percentage of persons under the age of 5 years is 6.8 percent, and the percentage of persons over the age of 65 years is 11.4 percent.)

Table 2 shows that two of the four proposed sites have EJ indicators. The poverty EJ indicator exists in one of the planned sites and one site has unemployment rate EJ indicator.

Table 2: Proposed Project Sites With EJ Indicators

City	Minority	Poverty Level	Unemployment Rate	Age
San Jose, California	X	-	-	-
Scotts Valley, California	-	-	-	-
Fremont, California	-	-	-	-
Sylmar, California	X	X	X	-

Source: Energy Commission staff analysis

Demographic data for the cities for all of the proposed projects analyzed in this *LHI Report* (with and without EJ indicators) is shown in Table 3. Combined with the EJ indicators, Table 3 provides more insight on the four communities.

Table 3: Demographic Data for Cities With EJ Indicators[8] (percent)

2010 Data	Persons Below Poverty Level	Black persons	American Indian and Alaska Native	Persons of Hispanic or Latino Origin	White persons	Persons under 5 years of age	Persons over 65 years of age	Unemployment rate[9]
San Jose, California **Population: 945,942**	10.80	3.20	0.90	33.20	28.70	7.30	10.1	12.2
Scotts Valley, California **Population: 11,580**	4.1	0.9	0.5	10.0	80.0	5.4	13.6	6.1
Fremont, California **Population: 214,089**	5.2	3.3	0.5	14.8	26.5	7.1	10.2	8.2
Sylmar[4], California **Population: 3,792,621**	19.5	9.6	0.7	48.5	49.8	6.6	10.5	13.9
California Population 37,253,956 (2010)	**13.7 (2006-2010)**	**6.2 (2010)**	**1.0% (2010)**	**37.6 (2010)**	**57.6 (2010)**	**6.8 (2010)**	**11.4 (2010)**	**12.2 (2010)**

Source: Energy Commission staff analysis

[8] http://quickfacts.census.gov and http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=133

[4]Los Angeles city demographic data used.

CHAPTER 4:
Summary

If funded, the proposed projects would be implemented in four California sites located in San Jose, Scotts Valley, Fremont, and Sylmar. All four sites would be in nonattainment zones for ozone, PM 2.5 and PM 10.

Of the four cities proposed for the project sites, two have no EJ indicators, one has an EJ indicator, and one has three indicators. The high-risk communities, according to the Environmental Justice Screening Method (EJSM), are San Jose and Sylmar.[10]

Based on the review of the proposed projects in this *Localized Health Impacts Report*, it is not anticipated that the implementation of the proposed projects would have negative impacts on surrounding communities because a net increase in criteria and toxic emissions will not result. Environmental justice communities with social vulnerability indicators exist in the San Jose and Sylmar areas. Combined with these communities' high exposure to air pollutants and related health risks, the areas could be disproportionately affected if the project were to result in an emissions increase.

The anticipated benefit from these projects for the people who live in these cities is highly likely, if not certain, to be positive. The benefits may vary. In this report we have focused on the benefit to air quality. Based on the staff's assessment of the proposed projects, it is expected that none of the surrounding communities would be disproportionately impacted by the implementation of the projects. While overall air quality depends on a number of factors, the Energy Commission expects that air quality will improve over time where the projects are proposed.

5California Air Resources Board (ARB), *Air Pollution and Environmental Justice, Integrating Indicators of Cumulative Impact and Socio-Economic Vulnerability Into Regulatory Decision-Making, 2010.* (Sacramento, California). Contract authors: Manuel Pastor Jr., Ph.D., Rachel Morello-Frosch, Ph.D., and James Sadd, Ph.D.

CHAPTER 5:
Acronyms

Air Quality Improvement Program (AQIP)

Air Quality Management District (AQMD)

Bay Area Air Quality Management District (BAAQMD)

Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP)

California Air Resources Board (ARB)

California Code of Regulations (CCR)

California Energy Commission (Energy Commission)

California Environmental Quality Act (CEQA)

Diesel gallon equivalent (DGE)

Environmental justice (EJ)

Environmental justice screening method (EJSM)

Greenhouse gas (GHG)

Localized health impact (LHI)

New Source Review (NSR)

Particulate matter (PM)

South Coast Air Quality Management District (SCAQMD)

United States Environmental Protection Agency (U.S. EPA)